Plum growers learn about orchard management practices that help reduce the amount of pesticides entering streams in field runoff.

Award Amount
$400,000

Watershed
Sacramento and Feather River Watersheds

County
Sutter and Yuba Counties

CALFED Region
Sacramento Valley Region

Legislative Districts
US Congress: 2
State Assembly: 2 and 3
State Senate: 4

Purpose

Reduce runoff of organophosphate pesticides into surface waters of the Sacramento and Feather River Watersheds.

Project Goals

- Identify ten demonstration orchards in the Sacramento/ Feather River Watershed to test alternatives to existing methods of dormant application of organophosphate pesticides.
- Involve the grower community in demonstrating that alternatives to present practices of dormant application of diazinon can be cost effective as well as effective in addressing pest management needs.
- Determine the best methods of mitigating for organophosphate pesticide runoff from agriculture.

Benefits to the CALFED Program

Organophosphate (OP) pesticides, including diazinon and chlorpyrifos, have been identified by the CALFED Program as contaminants of concern in both the Central Valley and the Delta. The Water Quality Program Plan (WQPP) states that some of the highest concentrations of diazinon and longest exposures are typically in small water courses adjacent to high densities of orchards. The WQPP proposes a number of corrective actions be taken to resolve this water quality problem. Actions proposed include developing and demonstrating cost-effective management practices, which is the goal of this project. Through ten demonstration sites, this project shows local growers alternative methods to reduce the impacts of OP pesticides in their orchards and thereby improve water quality in adjacent Bay-Delta waterways.

Project Overview

This project includes the identification of ten demonstration orchards to conduct pilot projects to reduce the use of organophosphate pesticides. Organophosphate pesticides, such as diazinon, chlorpyrifos, methidathion, and matathion, are of particular concern in the Central Valley because of the number of applications to dormant orchards (trees that are not leafed out). This "dormant spraying" controls a number of insect pests and typically occurs from December through February. During this period, as much as one million pounds of active organophosphate pesticides are applied to 500,000 acres of almonds and stone fruits in the Central Valley. Storm events that follow the organophosphate pesticide applications can wash the recently applied pesticides into surface waters in concentrations toxic to sensitive invertebrates. Invertebrate communities are necessary food items for nearly all of the priority fish populations in the Bay-Delta system. Dormant season spraying coincides with the time when these fish (including delta smelt, Chinook salmon, and steelhead trout) are in the early life stages.

The ten demonstration watersheds, located in the Feather River Watershed are being used to involve the grower community. They demonstrate that alternatives to dormant application of diazinon can be cost effective as well as effective in addressing pest management needs. Runoff management practices are also being demonstrated.

Plum growers are shown how changing the timing of pesticide application can reduce the amount of pesticides entering local streams in runoff.

Contact Information

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